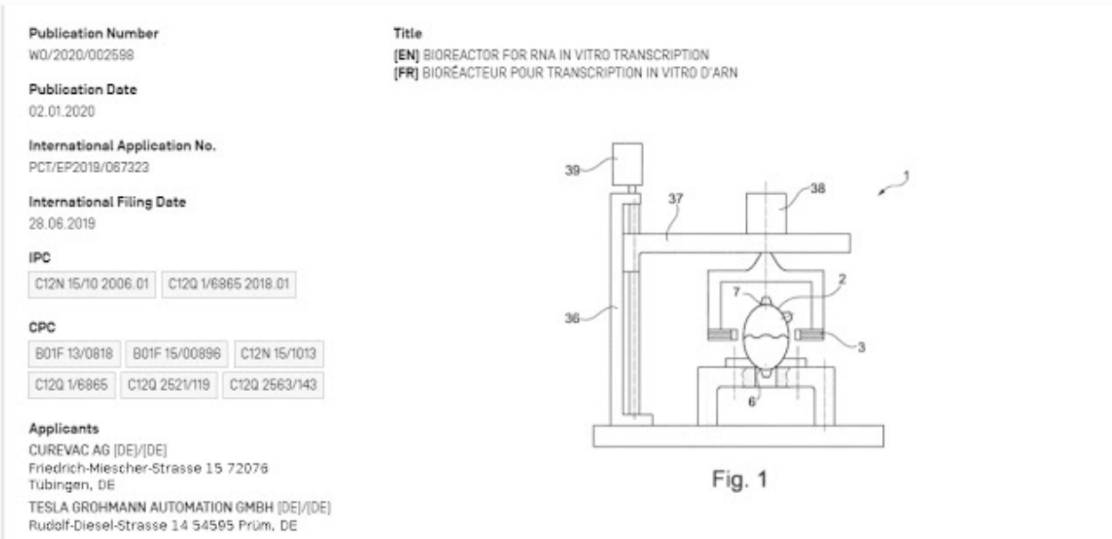
A caterpillar completely dissolves itself and eats the fluid to rebuild....

Listen To Elon Musk Talk About Synthetic mRNA & Where It's Heading!

Elon Musk patent:



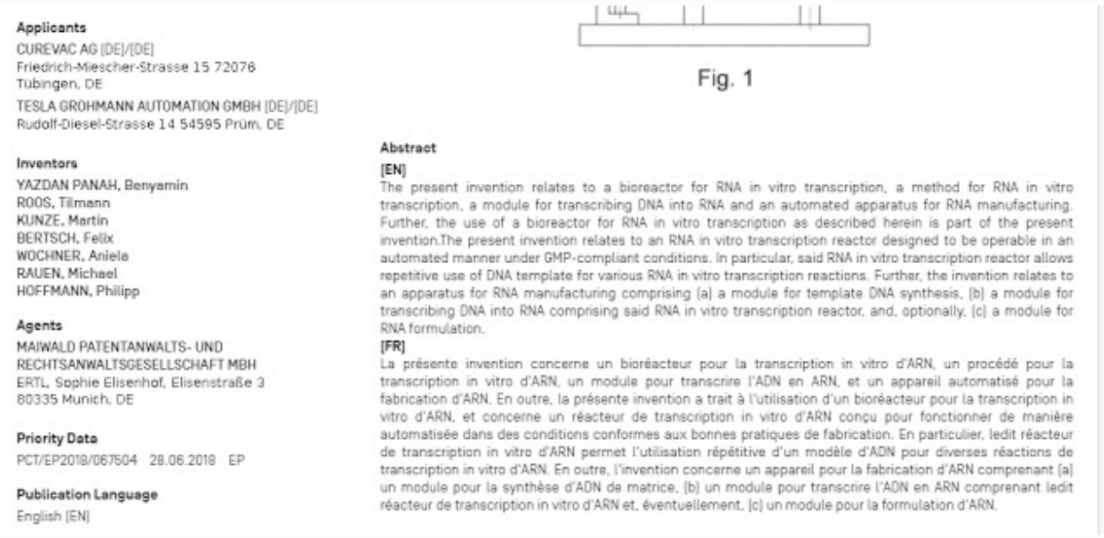


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Fig. 1

Abstract

[EN]
The present invention relates to a bioreactor for RNA in vitro transcription, a method for RNA in vitro transcription, a module for transcribing DNA into RNA and an automated apparatus for RNA manufacturing. Further, the use of a bioreactor for RNA in vitro transcription as described herein is part of the present invention.The present invention relates to an RNA in vitro transcription reactor designed to be operable in an automated manner under GMP-compliant conditions. In particular, said RNA in vitro transcription reactor allows repetitive use of DNA template for various RNA in vitro transcription reactions. Further, the invention relates to an apparatus for RNA manufacturing comprising (a) a module for template DNA synthesis, (b) a module for transcribing DNA into RNA comprising said RNA in vitro transcription reactor, and, optionally, (c) a module for RNA formulation.

[FR]
La présente invention concerne un bioréacteur pour la transcription in vitro d'ARN, un procédé pour la transcription in vitro d'ARN, un module pour transcrire l'ADN en ARN, et un appareil automatisé pour la fabrication d'ARN. En outre, la présente invention a trait à l'utilisation d'un bioréacteur pour la transcription in vitro d'ARN, et concerne un réacteur de transcription in vitro d'ARN conçu pour fonctionner de manière automatisée dans des conditions conformes aux bonnes pratiques de fabrication. En particulier, ledit réacteur de transcription in vitro d'ARN permet l'utilisation répétitive d'un modèle d'ADN pour diverses réactions de transcription in vitro d'ARN. En outre, l'invention concerne un appareil pour la fabrication d'ARN comprenant (a) un module pour la synthèse d'ADN de matrice, (b) un module pour transcrire l'ADN en ARN comprenant ledit réacteur de transcription in vitro d'ARN et, éventuellement, (c) un module pour la formulation d'ARN.

Elon Musk tell us in what the vaccine is doing.... "The caterpillar does it"

What does the caterpillar do?

Chrysalis — or why the caterpillar must die

A little story on death and resurrection

I used to think that when the caterpillar turns into a chrysalis, the process going on inside would be something resembling our human adolescence. Just like our kids have

their voices, curves or muscles change almost overnight, I reckoned the caterpillar's shape would evolve, its body would become thinner and more elongated, and somehow from the surplus substance the wings would grow out. It turns out that isn't what happens at all.

If you were to open the chrysalis halfway through its nympha stage emerging from the capsule would not be some hybrid creature, half caterpillar half butterfly, but a puddle of liquid.

Tesla's New RNA Bioreactor - The Next Biotech Revolution

The story of mRNA: How a once-dismissed idea became a leading technology in the Covid vaccine race

Before messenger RNA was a multibillion-dollar idea, it was a scientific backwater. And for the Hungarian-born scientist behind a key mRNA discovery, it was a career dead-end.

In 1990, researchers at the University of Wisconsin managed to make it work in mice. Karikó wanted to go further.

This technology was around before the flood. It was given to man by fallen angels. Even Francis Crick recognized this in his panspermia theory. Wannabe mangods like Musk are pathetic liars working for other sociopathic liars. Folks dance around the truth but dare not to accept it because doing so will reveal their own sin to themselves. We humans in these corruptible bodies sure do have fragile

egos. Especially given the fact Jesus died to save us from the second death of those sins, which is judgment from God.

The problem, she knew, was that synthetic RNA was notoriously vulnerable to the body's natural defenses, meaning it would likely be destroyed before reaching its target cells. And, worse, the resulting biological havoc might stir up an immune response that could make the therapy a health risk for some patients.

In time, those better experiments came together. After a decade of trial and error, Karikó and her longtime collaborator at Penn — Drew Weissman, an immunologist with a medical degree and Ph.D. from Boston University — discovered a remedy for mRNA's Achilles' heel.

The stumbling block, as Karikó's many grant rejections pointed out, was that injecting synthetic mRNA typically led to that vexing immune response; the body sensed a chemical intruder, and went to war. The solution, Karikó and Weissman discovered, was the biological equivalent of swapping out a tire.

Every strand of mRNA is made up of four molecular building blocks called nucleosides. But in its altered, synthetic form, one of those building blocks, like a misaligned wheel on a car, was throwing everything off by signaling the immune system. So Karikó and Weissman simply subbed it out for a slightly tweaked version, creating a hybrid mRNA that could sneak its way into cells without alerting

the body's defenses.

"That was a key discovery," said Norbert Pardi, an assistant professor of medicine at Penn and frequent collaborator. "Karikó and Weissman figured out that if you incorporate modified nucleosides into mRNA, you can kill two birds with one stone."

That discovery, described in a series of scientific papers starting in 2005, largely flew under the radar at first, said Weissman, but it offered absolution to the mRNA researchers who had kept the faith during the technology's lean years. And it was the starter pistol for the vaccine sprint to come.

And even though the studies by Karikó and Weissman went unnoticed by some, they caught the attention of two key scientists — one in the United States, another abroad — who would later help found Moderna and Pfizer's future partner, BioNTech.

Derrick Rossi, a native of Toronto who rooted for the Maple Leafs and sported a soul patch, was a 39-year-old postdoctoral fellow in stem cell biology at Stanford University in 2005 when he read the first paper. Not only did he recognize it as groundbreaking, he now says Karikó and Weissman deserve the Nobel Prize in chemistry.

He wondered whether modified messenger RNA might hold the key to obtaining something else researchers desperately wanted: a new source of embryonic stem

cells.

In a feat of biological alchemy, embryonic stem cells can turn into any type of cell in the body. That gives them the potential to treat a dizzying array of conditions, from Parkinson's disease to spinal cord injuries.

But using those cells for research had created an ethical firestorm because they are harvested from discarded embryos.

Rossi thought he might be able to sidestep the controversy. He would use modified messenger molecules to reprogram adult cells so that they acted like embryonic stem cells.

He asked a postdoctoral fellow in his lab to

explore the idea. In 2009, after more than a year of work, the postdoc waved Rossi over to a microscope. Rossi peered through the lens and saw something extraordinary: a plate full of the very cells he had hoped to create.

Within several months, Rossi, Langer, Afeyan, and another physician-researcher at Harvard formed the firm Moderna — a new word combining modified and RNA.

Despite the squabbling that followed the birth of Moderna, other scientists also saw messenger RNA as potentially revolutionary.

In Mainz, Germany, situated on the left bank of the Rhine, another new company was being formed by a married team of

researchers who would also see the vast potential for the technology, though vaccines for infectious diseases weren't on top of their list then.

That became BioNTech, another blended name, derived from Biopharmaceutical New Technologies. Its U.S. headquarters is in Cambridge. Sahin is the CEO, Türeci the chief medical officer.

"We are one of the leaders in messenger RNA, but we don't consider ourselves a messenger RNA company," said Sahin, also a professor at the Mainz University Medical Center. "We consider ourselves an immunotherapy company."

Shortly before midnight, on Dec. 30, the International Society for Infectious Diseases, a Massachusetts-based nonprofit, posted an alarming report online. A number of people in Wuhan, a city of more than 11 million people in central China, had been diagnosed with "unexplained pneumonia."

Chinese researchers soon identified 41 hospitalized patients with the disease. Most had visited the Wuhan South China Seafood Market. Vendors sold live wild animals, from bamboo rats to ostriches, in crowded stalls. That raised concerns that the virus might have leaped from an animal, possibly a bat, to humans.

After isolating the virus from patients, Chinese scientists on Jan. 10 posted online its genetic sequence. Because companies that work with messenger RNA don't need the virus itself to create a vaccine, just a computer that tells scientists what chemicals to put together and in what order, researchers at Moderna, BioNTech, and other companies got to work.

A pandemic loomed. The companies' focus on vaccines could not have been more fortuitous.

Moderna and BioNTech each designed a tiny snip of genetic code that could be deployed into cells to stimulate a

coronavirus immune response. The two vaccines differ in their chemical structures, how the substances are made, and how they deliver mRNA into cells. Both vaccines require two shots a few weeks apart.

Forty-two days after the genetic code was released, Moderna's CEO Bancel opened an email on Feb. 24 on his cellphone and smiled, as he recalled to the Globe. Up popped a photograph of a box placed inside a refrigerated truck at the Norwood plant and bound for the National Institute of Allergy and Infectious Diseases in Bethesda, Md. The package held a few hundred vials, each containing the experimental vaccine.

Elon Musk partner is CureVac ...

Several other drug makers have also developed experimental mRNA vaccines for the coronavirus, but are not as far along, including **CureVac**, another German biotech, and Translate Bio, which has partnered with the French vaccine giant Sanofi Pasteur.

Pfizer began its late-stage trial on July 27 — the same day as Moderna — with the first volunteers receiving injections at the University of Rochester. It announced its promising early results from that trial on Monday, and hopes to have sufficient data this month to seek emergency use authorization of the vaccine for at least some high-risk people.

https://www.statnews.com/2020/11/10/the-story-of-mrna-how-a-once-dismissed-idea-became-a-leading-technology-in-the-covid-vaccine-race/

In order to be able to become a butterfly, the caterpillar has to fall apart completely, decompose down to its very essence, devoid of any shape or consciousness. It literally dies. There is nothing left of it.

And from this liquid essence, the butterfly starts to put itself together, from scratch.

https://medium.com/the-story-hall/chrysalis-or-why-the-caterpillar-must-die-f932b8c3700a

https://www.biopharma-reporter.com/Article/2020/07/03/Tesla-building-RNA-microfactories-for-CureVac